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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/063,438 | 04/24/2002 | Kuo-Liang Lin | 8829-US-PA | 4961 |

31561 7590 06/23/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

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| EXAMINER |
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JELINEK, BRIAN J

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| ART UNIT | PAPER NUMBER |
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2615

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/063,438

Applicant(s)

LIN ET AL.

Examiner

Brian Jelinek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

The Examiner respectfully submits a response to the amendment received on 5/7/2005 of application no. 10/063,438 filed on 4/24/2002 in which claims 1-12 are currently pending.

Arguments

The Applicant's arguments have been fully considered but they are not persuasive. Please refer to the following office action, which clearly sets forth the reasons for non-persuasiveness.

The Applicant disagrees with the Examiner's interpretation of "conductive rolling units" as applied in claim 1. In response, the Examiner understands the Applicant's invention. The Examiner has broadly interpreted the conductive contact (Fig. 2, element 36) as a conductive rolling unit because the conductive rings roll across the conductive contacts while maintaining the electrical connection between the conductive rings and conductive contacts.

The Applicant argues that "the pan shaft 22 recited by Takada is barely a rotatable axis and is definitely not a so-called camera unit". In response, the Examiner strongly disagrees and notes that Takada discloses that (col. 1, lines 8-15; Fig. 6):

The present invention relates generally to a motor-driven swing unit such as a pan-tilt camera mount designed to remotely control panning and tilting operations of pan and tilt mechanisms for orienting, for example, an image-capturing device such as a surveillance camera vertically and horizontally, and more particularly to an improved structure of a

motor-driven swing unit capable of swinging a camera horizontally over a 360.degree.
range.

The Applicant argues that the "arrangement of the conductive rings 34 vertically arranged is physically different from that of the present invention's transmission traces which are located on one side of the camera unit and are concentric and coplanar." In response, the Examiner notes that there are a number of art recognized equivalent structures for enabling an electrical connection across a rotating connection (see Low, Mohr, and Herzig). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected any of these art recognized equivalent structures for enabling an electrical connection across a rotating connection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-2, 5-8, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Takada et al. (U.S. Pat. No. 6,479,813).

Regarding claim 1, Takada discloses a camera that can freely rotate with an angle of 360 degrees (col. 1, lines 8-15) comprising: a seat unit (Fig. 2, element 37); a plurality of conductive rolling units (because the conductive rings roll over the conductive contacts), allocated on one side of the seat (Fig. 2, element 36); a plurality of

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conductive lines, connected to the conductive rolling units corresponding thereto (Fig. 2, element 39); a camera unit, comprising a plurality of transmission traces in a form of a concentric circular structure on one surface thereof (Fig. 2, element 34, concentric about 22), the transmission traces functioning as a plurality of terminals of the camera unit, wherein the terminals include a power source terminal and an optional signal input/output terminal (Fig. 2, element 39; col. 5, lines 14-25); and a connecting-fitting unit, mounting the camera unit on the seat unit, allowing the conductive rolling units to be in electrical contact with the corresponding transmission traces, and allowing the camera to freely rotate over the side of the seat that has the conductive rolling units (Fig. 2, element 36; col. 4, lines 37-42).

Regarding claim 2, Takada discloses a power source line and a signal line connected to the corresponding conductive rolling units of the seat to output signal and provide power required by the camera (Fig. 2, element 36; col. 5, lines 14-19).

Regarding claim 5, Takada discloses a motor to rotate the camera unit (Fig. 1, element 24, tilt shaft coupled to a tilt motor).

Regarding claim 6, Takada discloses the motor comprises a circuit board located on the other side of the camera (Fig. 1, element 27).

Regarding claim 7, Takada discloses the connecting-fitting unit further comprises a bearing to allow the camera unit to freely rotate thereon (col. 4, lines 37-42; col. 1, lines 8-15).

Regarding claim 8, Takada discloses the camera comprises either a suspension type or a desktop (Fig. 1).

Regarding claim 10, Takada discloses a signal input/output method of a camera, comprising: forming a plurality of transmission traces on one side of a camera unit (Fig. 2, element 34), wherein the transmission traces have a concentric circular structure (Fig. 2, concentric about 22); connecting the transmission traces to a plurality of corresponding terminals (Fig. 2, element 36), wherein the terminals include a power source terminal and an optional signal input/output terminal (col. 5, lines 14-19); providing a seat unit (Fig. 2); allocating a plurality of conductive rolling units (because the conductive rings roll over the conductive contacts) on one side of the seat unit (Fig. 2, element 36), wherein a position of each conductive rolling unit corresponds to a position of the corresponding transmission trace (Fig. 2, elements 34 and 36); providing a plurality of conductive lines to connected to the conductive rolling units (Fig. 2, element 38); and mounting the camera unit on the seat to bring the conductive rolling units in electrical contact with the transmission traces, wherein the camera unit can freely rotate over the seat (Fig. 2).

Regarding claim 11, Takada discloses connecting the conductive rolling units to the corresponding conductive lines (Fig. 2, elements 36 and 39).

Regarding claim 12, Takada discloses allocating a motor to the camera unit for rotating the camera (Fig. 1, element 24, tilt shaft coupled to a tilt motor).

Claims 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Henderson et al. (U.S. Pat. No. 6,299,454).

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Regarding claim 9, Henderson discloses a steering column interconnector having conductive elastic rolling contacts. Henderson further discloses the interconnector comprises a rotatable input/output terminal structure, applicable for power supply and signal input/output of an electronic apparatus (col. 2, lines 1-5), wherein the electronic apparatus is installed on a seat and has the function of freely rotating with an angle of 360 degrees (because a steering wheel can be turned through more than 360 degrees), the input/output terminal structure comprising: a plurality of transmission traces formed on one side of the electronic apparatus (Fig. 1, element 82), wherein the transmission traces are coplanar and have a concentric circular structure (Fig. 1, element 82) and are electrically connected to a plurality of terminals of the electronic apparatus, including a power source terminal and a optional signal input/output terminal (Fig. 1, element 52); a plurality of conductive rolling units, allocated on one side of the seat, wherein a position of each of the conductive rolling units is corresponding to one of the transmission traces, and when the electronic apparatus is installed on the seat, the conductive rolling units are in electric contact with the transmission traces to allow the electronic apparatus to rotate over the seat (Fig. 1, element 66); and a plurality of conductive lines, electrically connected to the conductive rolling units to provide a power source and a signal input/output to the electronic apparatus (Fig. 1, element 52).

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takada et al. (U.S. Pat. No. 6,479,813) in view of Canizales, Jr. (U.S. Pub. No. 2003/0073325).

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Regarding claim 3, Takada does not disclose the conductive rolling units correspond to three of the conductive rolling units positioned with a 120 degrees between each other.

However, Canizales, Jr. discloses a slip plate assembly where each rolling member of a plurality of rolling members contact a first and second electroplate to create an electrical path there between (Abstract; Fig. 1). Furthermore, Canizales, Jr. shows that the conductive rolling units correspond to three of the conductive rolling units positioned with 120 degrees between each other (Fig. 3) because the conductive rolling units are placed continuously around the point of rotation. One of ordinary skill in the art would have provided rolling members comprising bearings for the purpose increasing operational life by reducing frictional wear between the moving electrical contacts (par 5-6). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided conductive rolling units comprising bearings placed continuously around the point of rotation, comprising three of the conductive rolling units positioned with 120 degrees between each other, for the purpose increasing operational life by reducing frictional wear between the moving electrical contacts.

Regarding claim 4, Canizales, Jr. further discloses each conductive rolling unit comprises a conductive rolling wheel (Fig. 2, elements 71 and 72), a conductive rolling bearing of the conductive rolling wheel (Fig. 2, element 76), and a supporting frame to support the conductive rolling bearing (Fig. 3, element 73).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takada et al. (U.S. Pat. No. 6,479,813) in view of Henderson et al. (U.S. Pat. No. 6,299,454).

Regarding claim 9, Takada discloses a camera mount capable of swing a camera over a 360 degree range (col. 1, lines 8-15). Takada further discloses a rotatable input/output terminal structure, applicable for power supply and signal input/output of an electronic apparatus, wherein the electronic apparatus is installed on a seat and has the function of freely rotating with an angle of 360 degrees (Fig. 2; col. 1, lines 8-15), the input/output terminal structure comprising: a plurality of transmission traces formed on one side of the electronic apparatus (Fig. 2, element 34), wherein the transmission traces have a concentric circular structure (Fig. 2, concentric about 22) and are electrically connected to a plurality of terminals of the electronic apparatus (Fig. 2, element 36), including a power source terminal and a optional signal input/output terminal (col. 5, lines 14-25); a plurality of conductive rolling units (Fig. 2, element 36, because the conductive rings roll over the conductive contacts), allocated on one side of the seat (Fig. 2, element 37), wherein a position of each of the conductive rolling units is corresponding to one of the transmission traces (Fig. 2, elements 34 and 36), and when the electronic apparatus is installed on the seat, the conductive rolling units are in electric contact with the transmission traces to allow the electronic apparatus to rotate over the seat (col. 4, lines 37-42); and a plurality of conductive lines, electrically connected to the conductive rolling units to provide a power source and a signal input/output to the electronic apparatus (col. 5, lines 14-19).

Takada does not disclose that the transmission traces are coplanar. However, Henderson discloses an interconnector having conductive elastic rolling contacts, wherein the transmission traces are coplanar and have a concentric circular structure (Fig. 1, element 82). Furthermore, Takada discloses a plurality of conductive rolling units, allocated on one side of the seat, wherein a position of each of the conductive rolling units is corresponding to one of the transmission traces, and when the electronic apparatus is installed on the seat, the conductive rolling units are in electric contact with the transmission traces to allow the electronic apparatus to rotate over the seat (Fig. 1, element 66). One of ordinary skill in the art would have provided the concentric coplanar transmission traces of Henderson for the concentric non-coplanar transmission traces of Takada because the coplanar and non-coplanar transmission traces are equivalent structures for providing electrical connectivity across a rotating electrical connection. Therefore, because coplanar and non-coplanar transmission traces were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to have configured the non-coplanar transmission traces of Takada as coplanar transmission traces. Furthermore, one of ordinary skill in the art would have provided the conductive rolling elastic contacts of Henderson for the elastic brush contacts of Takada in order to reduce frictional wear between slip rings and brush apparatus to increase operational life. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention have provided the conductive rolling elastic contacts of Henderson for the elastic brush contacts of Takada

in order to reduce frictional wear between slip rings and brush apparatus to increase operational life.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Low (U.S. Pat. No. 913,831), Mohr (U.S. Pat. No. 3,089,113), and Herzig (U.S. Pat. No. 1,176,554) disclose alternate structures, including planar and non-coplanar, for enabling an electrical connection across a rotating connection.

Golden (U.S. Pat. No. 1,929,686) and Dewald (U.S. Pat. No. 1,347,577) disclose rollers similar to those of the instant application. In particular, the Examiner notes that Golden comprises rollers at 120 degrees (Fig. 6).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Jelinek whose telephone number is (571) 272-7366. The examiner can normally be reached on M-F 9:00 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached at (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Jelinek
6/17/2005



DAVID L. OMETZ
PRIMARY EXAMINER